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The Organic Cell, Historically Considered.

THIRD PERIOD—1865–1884.

ORGANIZATION OF THE PROTOPLASM AND THE NUCLEUS—THEIR CHEMICAL CONSTITUTION.

In 1865 it was generally admitted that the fundamental properties of protoplasm in the two kingdoms of nature are identical; but protoplasm was still considered to be an hyaline mass, which is homogeneous and without visible structure. Even at the present day this is the opinion of many scientists, as may be learned by consulting the writings of Kollmann,* Strasburger† and of many others.

I.—Concerning the structure of protoplasm it was thought to be disposed in concentric zones: namely, an external zone, which was considered to be more transparent and more homogeneous than the internal mass, which was held to be granular, and often enclosing vacuoles and also other bodies termed "inclusions."

Many and various terms were used to designate the diverse parts of protoplasm; for example, De Barry (1863) calls the clear, external zone *epiplasm*; and it may be seen in thecae of the ascomycetes. Other terms, applied especially to protozoans and eggs, were—*Hautschicht*, *periplasma*, *ectoplasma*, even *protoplasma*, or protoplasm properly so called; the terms, *metaplasma*, *endoplasma*, *deuto* or *denteroplasma*, *Körnerplasma*, *polioplasma*, etc., were used for the internal granular mass. Recently A. Brass has distinguished as many as five and six concentric zones of protoplasm, and to each one he gives a distinct physiological name to indicate the function he supposes it possesses.‡

Hanstein (1880), taking a different stand-point,

distinguishes three elements in protoplasm, namely, 1st, The fundamental hyaline mass distributed throughout the cell; this he calls *hyaloplasma*.*

2d, The plastic fluid circulating in the threads and peripheral sac; this he calls *enchylema*.

3d, The granules, or *microsomata*, scattered in the hyaline mass and involved in the movement of the enchylema.

Since that time, the terms *hyaloplasm* and *microsomata*, or *microsoma*, were used by nearly all authors; but *enchylema* was considered as belonging to the hyaline protoplasm.

As soon as these distinctions became firmly established, a greater confusion arose in the terminology, and there was hardly any meaning left to the term protoplasm. We know the meaning Von Mohl had attached to it; but with M. Schultze protoplasm was regarded as synonymous with *Zelleib*—"cell body," and by this he understood the peripheral layer, or utricle, of Von Mohl; moreover, as we have just seen, some authors regarded protoplasm as synonymous with *periplasma* and *ectoplasma*. In 1875 Kupffer called protoplasm the fibres of the network (*reticulum*), and the rest of the protoplasmic mass he calls *paraplasma*; and Strasburger (1882), instead of restricting the meaning, made it altogether too general; for he called protoplasm all that has life in the cell—i. e., protoplasm, nucleus, chlorophyll bodies, etc. (by right he should have also added the cell membrane, because it too possesses life). The end of all these distinctions was that there was no distinction of protoplasm in the cell, and that cell and protoplasm should be considered as synonymous.† Some writers also used terms of their own; thus, Haeckel and Kölliker (1862) employed the term "cytoplasma" for the more classic one of "protoplasma." But let us not dwell any longer upon this abuse of terminology, and with Laneseau‡ we may truly say: "Nothing is more indeterminate than the meaning of the word

* Pfeffer (1877, p. 123) had used this term, but in a different sense, i. e., in the sense of primordial utricle or *Hautschicht*.

† Boze: *De l'influence de l'étude des myxomycètes, etc.*; *Bul. Soc. Bot. de France*, 1872, p. 29.

‡ *Du protoplasm végétale; thèse*, 1876, p. 1.

* Kollmann, *Über thierisches Protoplasma*. *Biol. Zentralblatt*, 1882–1883, p. 70.

† Strasburger, *Über den Theilungsvorgang*, etc. 1882.

‡ Arnold Braß, *Biologische Studien*, pp. 18–20.

'protoplasm'; in fact, every author uses it in his own sense."

II.—The distinctions and appellations just enumerated teach us nothing concerning the internal structure of protoplasm; even most of the authors that have devised or used them did not even suspect that organization to exist which Dujardin had foreseen. No doubt, cells having a visible structure had been known and observed since the time of Fontana; thus, for example, muscular cells, epithelial cells, nerve cells, etc.; but their structure was regarded as proper to these cells only—so to speak—a result of adaptation to their particular function. In 1859 Stilling discovered a fibrous structure in the ganglionic cells of nerves, and in 1864 Leydig observed the same structure in the intestinal cells of certain small crustaceans; but no one attached any importance to these discoveries.

It was Fromann who, in 1865-67, called attention to this fibrous structure, and he at once concluded that it must be a *general property* of living matter to be thus organized or structured; in 1873 Heitzmann reached the same conclusion. These views, however, were as yet regarded as extravagant. It is true, some of their assertions were of such a nature as to bring discredit upon their observations, which, evidently, were not extensive enough to warrant such sweeping generalizations. Fromann, Arnold, Klein, Kupffer, Schmitz, Flemming, Rauber, etc., by new observations rectified many points at issue, but never was there reached a definite conclusion as regards the structure of protoplasm; in fact, the study of this structure has only begun, and to the future belong the honor and task of elucidating this most intricate question.

III.—During this, the third period, the study of the chemical properties of protoplasm has made great progress. Microchemical researches are constantly multiplying, and are extended further and further. A glance at the list of reagents used now in a laboratory of cellular biology will convince any one of the real progress in this branch of the study of the cell.

Prof. Carnoy enumerates as many as seventy-four; and, judging from the date of their discovery, which he is careful always to add, we may safely conclude that microchemistry has steadily advanced since 1865, and the most happy and most successful results have been obtained; and this is chiefly owing to the discovery of so many new coloring reagents. We may safely predict the future success in biology to rest on the steady advances made in microchemistry.

Macrochemistry also has not been neglected. The various tissues of both animals and plants have been analyzed—already the albuminoids, lecithin, cholesterin, the soluble ferments, the carbon hydrates, the natural coloring matters, especially chlorophyll, hemaglobilin, etc., have been the special objects of investigation, as may be seen by referring to the "Physiological Chemistry" of Hoppe-Seyler* and to the important works of A. Mayer and Detmer.

In 1879 we gave the following as a *resumé* of the chemical constitution of protoplasm:

"Protoplasm is a complex mixture of various chemical elements. The most patient and most minute researches during the latter years have discovered that typical protoplasm, such as is found in young and active cells, consists of the following substances, which henceforth must be considered as essential elements in living matter:

- 1st, Albuminous matter (vitellin or myosin at least).
- 2d, Phosphoric matter (lecithin and nuclein).
- 3d, One or several hydro-carbonates (glycose, dextrin, glycogen).
- 4th, Soluble ferments (diastase, pepsin, emulsin).
- 5th, Water (of constitution and imbibition).
- 6th, Mineral elements (salts, sulphates, phosphates, nitrates of K., of Ca., and of Mg.)."

But we must not forget Reinke and Rodewald (1881) who recently made analyses of the plasmodium of *Aethalium septicum*, in which, besides the foregoing elements, others have been found as accidental. These analyses, as well as the microchemical researches of Zacharias (1881-83) have revealed, besides the above-mentioned elements, a new one of a protein nature, called *plastin*, which must be considered as important in the constitution of the cell. Finally, we may mention also a new order of soluble ferments discovered lately, and which have received the name of *coagulating ferments*. These ferments have been found to exist in many cells, both animal and vegetable, and must be regarded as indispensable to the accomplishments of certain phenomena of cellular life.

However great and extensive the microchemical discoveries have been, yet there remains still much incertitude concerning the essential composition of living matter.

IV.—A new era begins in 1865, both for the nucleus and protoplasm. Stilling, in 1859, had already noticed certain zigzag, filamentous bodies in the nucleus; Fromann regards these to be caused by strings and filaments crossing each other in their various ramifications; Heitzmann considers them as mere condensations of protoplasm; and in 1867 Hertig calls them *Struktursubstanz*, and the hyaline substance between them he calls *Strukturflüssigkeit*. Flemming, however, soon discovered that these bodies are arranged in the form of a network, called *reticulum*, and that it is the reticulum which is colored particularly by staining fluids; this fact at once proving its non-identity with the surrounding protoplasm—this being also a true exposition of the point in question. In 1879 Flemming calls the substance of the reticulum by the name of *chromatin*, and the part not affected by coloring reagents he calls *achromatin*.

The important discovery of Miesher, in 1871, marks an epoch in the history of the chemistry of the nucleus; he found in the cells of pus a particular substance to which he gave the name of *nuclein*, and he described also its most noted properties.

In our studies of the nucleus we always kept in mind these indications regarding the properties of *nuclein*, especially its solubility in diluted alkalies and concentrated acids; and in 1879, even before Flemming had used the term chromatin, we had already expressed our opinion that the substance in the nucleus which is colored is none other than

* Consult also his „Zeitschrift für physiologische Chemie.“

the nuclein of Miesher; and even since then we always used this term in our lessons. In 1881-82 Zacharias had arrived at the same conclusion, and by the same means. Most authors that have followed Flemming admit with him that the *reticulum*, or *chromatin*, is a typical structure of the nucleus. Balbiani, in 1880, remarked in the larvæ of *Chironomus* that the coloring part of the nucleus is a *continuous tubule*; and, naturally, he asks himself whether this was not the case in all nuclei? This, Strasburger, in 1882, affirmed, although he had extended his observations only to a few nuclei in vegetable cells. Rauber, in 1882, states that the chromophilous part of the nucleus may present a reticulate, a filamentous or a globoid form. Outside of this reticulum, or tubule of nuclein, according to all modern authors—if we except Zacharias—there exists also a sap, or homogeneous fluid, which is very aqueous, without granules, or any bodies of a particular form—(this is the achromatin of Flemming, the *Sernjaft* of others)—and often there are to be found in this fluid one or more nucleoli, the nature of which remains as yet to be determined.

As regards the membrane of the nucleus, some—as Peitzner, Retzius, Freud and Brass—deny its existence, whilst others admit it; and among the latter, many, with Flemming, regard it as belonging to the nucleus proper, either as not belonging to the chromatin part, or with Rauber, as depending on it; whilst others, as, for example, Strasburger, regard it merely as a condensed layer of the surrounding protoplasm. We may be permitted to add that in the prospectus to our treatise on Cellular Biology, nearly a year ago, (1883), we have called attention to a second element in the nucleus, besides the tubule of nuclein—*i. e.*, a protoplasmic part formed of a reticulum proper, and a granular portion, called *enchylema*, found in the meshes of this reticulum; and, as far as we know, this had never been observed before by anyone.

The structure of the nucleus remains still buried in darkness, and in 1883 Rauber declares it to be still a scientific conundrum, or puzzle.

* * *

Thus far Professor Carnoy leads us in the history of the organic cell; but we cannot leave the reader without stating what the Professor of Louvain has done in this field of research.

He went to Louvain in 1876, and founded at the great Catholic University a chair, or rather a Laboratory, of *Cellular Biology*, the first of the kind in the world; and he himself disputes this honor with anyone, when he declares, in the opening of his great work on the "Biology of the Cell," that to his knowledge no such laboratory or course exists anywhere. Prof. Carnoy has met with the greatest success. Hundreds of students have availed themselves of the opportunity offered them in his laboratory, and already the fruits of his undertaking begin to appear. In the 5th volume of *Science*, No. 115, dated April 17, 1885, a good notice on Canon Carnoy's work on Cellular Biology appeared. The writer there says:

"Of late years, a vast number of important papers have

appeared, dealing with the structure and properties of cells. They are scattered over the pages of many journals, and written in many languages; and the time had come for some one to collect and unify them. A good summary of the more important results of the work of the past twenty years, and a good bibliography, aiding those desiring more detailed information to find it in original sources, was necessary. Canon Carnoy undertook this task; and, so far as the present fascicule of his treatise on the 'Cellular Biology' goes, has performed it well. . . . An important and gratifying feature of the book is that its illustrations are not only good, but new."

We beg to differ somewhat with the writer in *Science*; and we believe ourselves authorized to do so, for we know the Professor of Louvain a little better; and we know, too, that this treatise on Cellular Biology is not a mere summary of what others have done in this field of science: it is rather a newly-constructed science; for before the appearance of Prof. Carnoy there was no such branch of science as Cellular Biology. Can the author of the above lines show us a single illustration taken from a treatise on the cell published before the "*Biologie Cellulaire*" of Carnoy? Can he point out a single instance in which Canon Carnoy took for granted any statement made by any author?—does he not rather choose new material to demonstrate all biological facts known of the cell? Has Canon Carnoy not reduced to a system all facts bearing on cell-life? in a word, has he not created a new science? Who, before him, has treated the cell *ex professo*? Certainly, we agree with the writer in *Science* that he has well presented a summary of the work done concerning the organic cell during the past twenty years, but we claim that he has done more. Since the appearance of the first fascicule of the "*Biologie Cellulaire*," Canon Carnoy has made new researches concerning cell-division, and his results are published first in "*La Cellule*"—a periodical devoted to the publication of original researches on the cell, and subsequently reprinted in special fascicules. The first of these researches on cell-division bears the title, "*La Cytodiérèse chez les Arthropodes, Etude Comparée du Noyau et du Protoplasme à l'Etat Quiescent et à l'Etat Cinétique*." The second is entitled, "*La Cytodiérèse de l'Œuf de l'Ascaris Megatocephala*." If time permits us, we will make the reader also acquainted with these two great works of the Professor of Louvain, and thus we hope to repay, with gratitude, the kindness he has shown the writer during the two years he had the opportunity and pleasure of working in the laboratory of Canon Carnoy, in the University of Louvain.

A. M. K.

THE true gentleman carefully avoids whatever may cause a jar or jolt in the minds of those with whom he is cast; all clashing of opinion, or collision of feeling, all restraint, or suspicion, or gloom, or resentment; his great concern being to make everyone at his ease and at home. He is tender towards the bashful, gentle towards the distant, and merciful towards the absurd. He guards against unreasonable allusions or topics which may irritate; he is seldom prominent in conversation, and never wearisome.—*Cardinal Newman*.

"Liberty Enlightening the World."

*Bartholdi's Colossal Statue on Bedlowe's Island—
New York Harbor.*

BY E. A. MUNRO.

Great Liberty! proudly this nation now hails thee,
Majestic and fierce as thou facest the sea;
Upholding thy torch that enwraps us in glory,
Telling all men around us—"our people are free!"

We are free! as the waves that are playing before thee;
We are free as the air that encircles thy brow;
And sweet as the song of the birds flitting o'er thee,
Is the thought of our hearts as we look on thee now.

France fought for us, Liberty, shed her best blood for us;
Had these not died, thou hadst ne'er been our own.
The country that gave thee—thou beautiful wonder!—
Is the country that helped us to save our own home.

Now, when we gaze on thee, let every heart of us
Love that great nation, far o'er the sea;
May *La belle France* be enshrined in our bosom
That fought for *our Liberty*!—then gave us *Thee*.

The Hawaiian Islands.

IV.

WONDERS OF THE FIRE LAKES.

But all that I have yet spoken of is insignificant when compared with the wonders and terrors of the fire lakes of Kilauea. No mere description can give an idea of them. Pen and pencil are powerless to convey to one an idea of what is to be witnessed by a visit to the reality. It is, without question, the most wonderful and the most stupendous exhibition of its kind in the world. *Ætna*, *Vesuvius*, *Stromboli*, *Jorullo*, are grand and imposing in their way, but *Kilauea* eclipses them all. It is by far the largest of active volcanoes, and in many ways the most interesting.

The crater, or, to use the technical term, the *caldera* of *Kilauea*, is nine miles in circumference, and its northern brink is only a few rods from the "Volcano house." The walls of the *caldera* are from five to six hundred feet in height, and are quite precipitous and in most places unscalable. The descent, however, on the side on which the "Volcano house" is built, is quite easy, and one may go on horseback clear to the bottom of the *caldera*, until he reaches the edge of the vast lake of rough, black lava that fills up the entire depression. But when the lava is reached one must dismount and make the rest of his explorations afoot.

Kilauea is called an active volcano; but that does not imply that the entire crater, or *caldera*, is at any one time in a state of eruption. As a matter of fact, only portions of this great area are eruptive, and these portions are constantly shifting position and changing in contour and dimensions. The present seat of activity is now,

and even before the recent subsidence, was, about three miles from the northern wall or *pali*. And what a tiresome walk these three miles are! I shall never forget it. Over solidified waves of shining, black lava, across deep *crevasses*, the sides of which, in some cases, are red hot, around huge rock bubbles, which would not bear the weight of a man, *Mao*, my guide, and myself slowly and carefully wended our way until we reached the centre of *Kilauea's* activity. Here we found wondrous ruins of what had been a few months before. Almost before we could realize it we were on the brink of a vast, yawning abyss, about half a mile long and a third of a mile wide, that, up until the sixth of last March, was filled with incandescent lava. During that night the lava suddenly disappeared, leaving nothing but the deep, threatening pit before us. For several weeks this was all that was to be seen of the whilom famous fire-lake of *Haleuaunau*. But shortly before my arrival, a deposit of lava began to form near the western end of the chasm, and when I reached this part of the crater I was delighted to find that there was quite a large lake of molten lava, from the centre of which several fire-fountains were playing quite vigorously. This fire-lake is now about seven hundred feet long and four hundred feet wide, and is frequently entirely covered with red-hot liquid lava. At night it is a magnificent spectacle indeed. The fire-fountains, which play continually, throw up incandescent lava to a height of from twenty-five to thirty feet, and brilliantly illuminate the thick, sulphurous vapors and the clouds above so that they can now be seen for a distance of thirty and even forty miles. It is these dense vapors or the impalpable dust that arises from some volcanoes, that are so often mistaken for smoke, and it is the bright reflections of the white-hot lava below from the dust and vapors, that give to them the appearance of being afire. Such a thing as combustion does not take place, and flame and smoke, in the proper acceptation of the terms, do not exist.

One could never tire witnessing the ceaseless activity of the crater. Everything here is on such a grand scale, and the pyrotechnic displays are so really gorgeous that they have a fascination peculiarly their own.

The lava lakes of *Kilauea* now are not as large as they were some months ago; but I would rather see the volcano as it is now than have seen it as it was when the lake beds were full. It is in every way more interesting, and one can now form a better idea of the nature and formation of the crater than would otherwise be possible. One can descend to the bottom of the pit, some 500 or 600 feet in depth, and nearly 1,000 feet below the top of the wall surrounding the *caldera* proper, and can approach with impunity the very edge of the wondrous lake of fire. When one gets so near such a large body of melted lava, the heat, as can be readily imagined, is quite intense, but one can have time to dip the end of his staff into the liquid mass, and draw out enough of it to constitute a souvenir of his visit to *Pele's* sanctuary. I was fortunate in

being able to secure several such specimens, but since they have cooled, I find them so fragile that I scarcely know how I will ever get them home. They will require the most careful handling.

What most impresses one in contemplating the wonders of Kilauea is the magnitude of everything about it—the immense *caldera*, the vast lakes of fire, and the enormous quantities of lava that flow therefrom. Vesuvius, taken by itself, is grand, but it is small, indeed, in comparison with this marvel of the Southern seas. It has been calculated by geologists that during one of the recent eruptions of Kilauea, fully forty times as much lava was poured out of it as was ever ejected from Vesuvius during the greatest of its eruptions.

A SAFE VOLCANO.

And then Kilauea is entirely unlike most other volcanoes; for there is nothing explosive about it, as is the case with Vesuvius, *Ætna*, Jorullo and other well-known volcanoes. No cinders or ashes are given off, and there are no accompanying detonations. It belongs to the class called *quiet* volcanoes, as does also its mammoth neighbor, Mouna Loa. Only once in its history has Kilauea been known to eject ashes, and scorix, and that was some sixty years ago, during the reign of Kamehameha I. The action of the volcano is limited to the filling up of the crater with molten lava, which eventually either overflows the lip of the crater or escapes through some fissure made in the flank of the mountain. After the crater is thus emptied, there is, again, a period of filling up, which may require many years. Kilauea, however, is remarkable from the fact that there is nearly always present in its crater a larger or smaller lake of incandescent lava. Only a few times—and one of these was last March—has its crater been known to be entirely empty, and then there was an absence of lava during only a few weeks.

The eruptions, or rather the overflows, of Mouna Loa occur on an average only once in nine or ten years; but then the phenomena witnessed are on a scale of magnificence that is simply terrible. The lava then rushes out in immense rivers of fire, which frequently extend as far as the sea, forty or fifty miles away. The last eruption oc-

curred in 1881, when the flourishing village of Hilo narrowly escaped destruction. The amount of lava that was then poured out was phenomenally great, and not the least interesting of the many natural features of Hawaii are the congealed lava rivers of '81. The inhabitants here look for another eruption of Mouna Loa in the near future, as they say one always occurs shortly after a subsidence of Kilauea, such as that which took place in March last. As yet there are in the crater of Mouna Loa no evidences of such a forthcoming eruption, but it may become suddenly active, with little or no warning, as it has done frequently on other occasions.

TWIN FIRE MOUNTAINS.

I have spoken thus of Mouna Loa, as it and Kilauea are, properly speaking, one and the same volcano, or, more truly, Mouna Loa has two craters,

that of Mokuaweoweo on the summit, about 14,000 feet above sea level, and Kilauea on its southern slope, 9,500 feet lower down. But the strangest feature about the volcano is that the two craters, although in such close proximity and having such similarity of action, and giving forth the same kind of lava, seem to have no closer connection with each other. On the contrary, they appear to be perfectly independent, especially during periods of eruption. Mokuaweoweo may be violently active and Kilauea comparatively quiet or even empty, although the former is over 9,000 feet above the latter and not more than twenty miles distant. It would seem that in this case, at least, both craters should be simultaneously active. But they



KAMEHAMEHA I.

are not so, and this fact alone gives rise to one of the most puzzling problems connected with the study of the volcanoes of Hawaii.

But what, some of my readers may ask, has become of the lava that disappeared from the crater of Kilauea March last? This is a question that has been puzzling every one since the outflow, but it is a question to which no answer has yet been given. It may have been drained off into some subterranean cavity, or it may have passed off under the ocean. Either supposition is probable, but in neither case could the course of the lava be followed. Some trace of it may be discovered eventually, but as yet we must remain in total ignorance as to how and

whither the transfer was made. This, however, is only one of the many things of which Science is compelled to acknowledge ignorance. We, as yet, know little or nothing about the real

NATURE OR CAUSE OF THE VOLCANOES,

and will probably never have much more positive knowledge about them than we have now. Chemists, geologists, physicists, astronomers and mathematicians have their favorite theories about volcanoes, but all of them are open to grave and apparently unanswerable objections.

Hawaii is the best place in the world for studying the nature of volcanic action; for, in addition to Kilauea and Mouna Loa, there are the extinct volcanoes of Huelalai and Mouna Kea which is even higher than Mouna Loa, and only a few miles further to the northward. But, with all the advantages for investigation here offered to the scientist, the mysteries regarding the nature of volcanoes are as numerous and as inscrutable as ever. Nature still mocks the intruder who would pry into the secrets of her laboratory, and when one fancies he has found a clue to some of her processes, he is soon disabused of his vain notion, and finds that he is as far away from the knowledge sought as ever. But failure should not discourage one. If we cannot find out everything about volcanoes, we can discover something that will be of value, not only in its relation to volcanic action, but also in explaining other phenomena of nature that are equally interesting, and for the present just as unintelligible.

I shall ever remember my visit to the crater of Kilauea. It is an event in any one's life to visit such a scene. But there are circumstances that can render such a visit doubly memorable. I reached the crater quite early in the afternoon, and was so taken up in examining various phenomena while there that I did not think of returning until nine o'clock at night. The sky was then covered with heavy, black clouds, and the rain was pouring down quite rapidly. But, fortunately, I had a waterproof with me and was able to keep dry. The scene at the crater—and for that matter anywhere along the route of our long, tiresome tramp back to the "Volcano house"—was weird in the extreme. It reminded me of the descriptions given by Dante and Milton of the infernal regions. Indeed, I do not think there is any place in the whole world that more correctly answers to the descriptions given of hell by those great poets than this same mammoth crater of Kilauea. Feeling our way through the rain and gloom over the immense lava deposit of the *caldera*, with no light but that of our lanterns and the fitful glare afforded by the sulphurous vapors arising from the crater behind us, I could well recall

"—Your deary plain, forlorn and wild,
The seat of desolation, void of light,
Save what the glimmering of these livid flames
Casts pale and dreadful."

We were travelling over dangerous ground; but with Mao as guide—and he was the most careful and intelligent guide I have ever met—I

am now happy to record that the trip back to our lodgings was made most successfully. At a late hour we reached the "Volcano house," foot-sore and half famished, but our host had a warm, and even sumptuous repast awaiting us, and this, together with the comfortable bed that occupies a goodly portion of my little room, contributed wonderfully towards removing all pains and aches, and making "Richard feel himself again."

To-morrow I leave for Honolulu, whence I hope to be able, sooner or later, to send you a communication regarding the great scourge of these islands, leprosy. Until then, adieu! or, as it is said here in the sweet tongue of Hawaii-nci, *Aloha!*

(TO BE CONTINUED.)

Art, Music and Literature.

—The last poem which Byron ever wrote has been found among the papers which he left at Missolonghi on his death. It will soon be published, with some unedited correspondence.

—The exhibition at Paris in 1889 will be held in three buildings, occupying the sides of the Champs de Mars. On the fourth, or river side, the great tower will rise, in case that project is carried through against the protests of land-owners in the vicinity and those Parisians who appreciate the folly of such a structure.

—The publication of the third volume of Cardinal Massaia's excellent work, "My Thirty-five Years of Missionary Life in Upper Ethiopia," is announced. This volume is the most important one of the work, as it relates the apostolic labors of the venerable missionary among the most barbarous races in the kingdom of Abyssinia. There is no doubt that it will have a success equal to that awarded the two volumes already published.

—A recent lecturer on "Russian and Polish Composers," gives a high place to the Slavonic element in the music of the future. "The dreamy sadness and the fiery exaltation which by turns appear in the works of such typical composers as Rubenstein, Grieg or Chopin, shows how much beauty and originality this field has to offer to the musical world. The time will come when there will be but two chief influences in musical creation—vehemence of the Latin races, and the plaintive sweetness of northern people; and there will come a composer who will understand how to use these materials more thoroughly, who will combine the melodic power of folk music with the classic forms demanded by the cultured musician; and the music of the north will have a high place of honor in forming the music of the world."

—The monks of the abbey of Notre Dame of Lerins have undertaken the laborious task of bringing together in one volume the translation of the *Magnificat* into 150 languages, printed in their proper types. Each translation will be surrounded by a border printed in different colors, and drawn by the best artists for this work. The preface,

each page of which will be illustrated, will have a splendid frontispiece in colors and gold, representing the Visitation of the Blessed Virgin to St. Elizabeth, and a brief eulogium of the *Magnificat*, written in six languages—Latin, French, Italian, Spanish, English and German. The work will be presented to His Holiness on his Jubilee. A copy of this work, elegantly bound, will be sent to every subscriber of 100 francs (\$20), addressed to the Rev. Father Abbot of Lerins, near Cannes, Alpes Maritimes, France.—*Pilot*.

—It is understood that Mr. Gladstone was paid £250 for his article on "Locksley Hall and the Jubilee" in the current number of the *Nineteenth Century*; and this suggests "two sorts of interesting reflections" to the *Pall Mall Gazette*—one of which cannot fail to be of interest to journalists. Say the article was about twenty pages, and there are about 500 words on a page. In £250 there are exactly 60,000 pence, which shows Mr. Knowles's rate of pay to his most eminent contributors to be about 6d. a word. Speech, or rather writing, is certainly golden in this case, whatever silence may be elsewhere. Our contemporary wonders, naturally enough, at what rate "the other three distinguished contributors" were paid, and goes on to appraise their contributions at something like this, keeping to the proportion of Mr. Gladstone's sixpence a word—Mr. John Morley twopenny a word, Mr. Matthew Arnold one halfpenny, Mr. Swinburne ten words a penny. *Apropos* of this staggering cheque, it is needless to say that such a golden opportunity for quoting a few figures of prices given and accepted for literature which—well, is less ephemeral than Mr. Gladstone's golden eloquence—could not be passed by. So we are reminded that Goldsmith received £60 for the "Vicar of Wakefield," Johnson £100 for "Rasselas," and £300 for the "Lives of the Poets." The Lambs were paid sixty guineas for the "Tales from Shakspeare," Fielding received £600 for "Tom Jones." "But," adds the *Pall Mall Gazette*, "we have no space to quote innumerable instances of such Grub-street prices paid for work which still delights the world. Take Thackeray, for instance, who said that he had never made more than £5,000 for any of his books. Fancy the price of twenty *Nineteenth Century* articles for 'Vanity Fair!' On the other hand, Scott made in less than two years £26,000; Lord Lytton is said to have made £80,000 by his novels; Dickens is supposed to have cleared over £10,000 a year during the publication of 'Nicholas Nickleby,' and £7,000 was to have been paid for 'Edwin Drood.' 'Dizzy' is said to have made £30,000 by his novels, while 'George Eliot's' profits on 'Romola' were estimated at £10,000, and Mr. Wilkie Collins received £10,000 for two novels alone. Byron's gains were about £23,000; Moore was paid £3,000 for 'Lalla Rookh;' Macaulay received £23,000 on account for three-fourths of his 'History.' These figures would have been doubled (shall we say?), but, alas! there was no Barnum of literature in those days. What is a pen without a name?"

Scientific Notes.

—The great heart of Jumbo weighed after death forty pounds. The human heart weighs, at most, eleven ounces.

—It is recommended that water pipes exposed to freezing be covered with glazed cotton batting. It is easily applied, and should be put on to the thickness of one to three inches, according to exposure, being wound around loosely with twine.

—The difficulty of sighting rifles in the dark in warfare has been ingeniously overcome by the use of luminous paint. A small luminous bead is clipped on to the rifle over the fore-sight, and another over the rear-sight, forming two luminous sights.

—The application of electricity in determining the speed of railway trains is recorded in Germany. A series of keys is affixed at equal intervals along the line. A passing train, by its weight, depresses the keys, whereby an electrical circuit with the nearest station is closed. By a simple mechanical device a series of dots is thus recorded, the proportionate distance between them representing the rate of the train.

—The invention of a new optical glass by Prof. Abner and Dr. Schott, of Iena, is creating a sensation in the German scientific world. The glass, owing to its great refractory power, promises to be of marked influence in practical optics, inasmuch as it will admit of the production of lenses of short focal width, such as it has hitherto been impossible to obtain. For microscopic photography it will be of the greatest importance. Objective lenses made of the ordinary optical glass now in use did not admit of distinct reflections beyond one-500,000th of an inch, while the new glass renders one-204,700,000th of an inch visible. The old glass consisted of a composition of six ingredients; the new one of fourteen ingredients, of which phosphorus and borax form the principal elements. The Prussian Government has largely aided the inventors in their numerous and interesting tests.—*Journal*.

—Some valuable researches have been made in France into the comparative oxidizability of cast iron, steel, and soft iron under the influences of moist air, sea water, and acidulated water. With moist air it was found that in twenty days the steel plates lost from three to four grams for every two square decimetres of surface; chrome steel rusted more, and tungstated steel less than the carburetted steel; cast iron lost only about half as much as the steel, and spiegeleisen less than gray iron. Sea water dissolves iron rapidly, and acts upon it more powerfully than on steel, most powerfully of all upon spiegeleisen. In nine days the steel plates, with two square decimetres of surface, lost from one to two grams, while phosphorized iron lost five grams, and spiegeleisen seven. Tempered steel was less affected than the same steel twice annealed, soft steel less than chrome steel, and tungstated steel less than the ordinary steel with the same proportion of carbon. Acidulated water dissolves cast iron much more rapidly than steel,

NOTRE DAME SCHOLASTIC.

Notre Dame, February 12, 1887.

The attention of the Alumni of the University of Notre Dame and others, is called to the fact that the NOTRE DAME SCHOLASTIC has now entered upon the TWENTIETH year of its existence, and presents itself anew as a candidate for the favor and support of the many old friends who have heretofore lent it a helping hand.

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The Editors of the SCHOLASTIC will always be glad to receive information concerning former students and graduates of the University.

—Our esteemed contemporary, the *South Bend Register*, will persist in mixing up religion and politics most wofully, besides attributing to us an idea which we did not "seek to convey;" and, we believe, a second careful reading of our article of last week will show the Editor of the *Register* wherein he is wrong. We made a statement in our last number in regard to the bearing of the Church in questions of religion and politics, and nothing in the half-column article of the *Register* this week has shaken our position. The cable dispatches, etc., quoted, do not concern us, or anybody else, except the persons addressed. The *Register* is completely in error in regard to the workings and nature of the institution of the Propaganda, whose relations with the priest mentioned are of an exceptional kind, arising from the fact that he was educated by, and is a graduate of, that institution. But leaving that aside, we do not think that the Editor of the *Register* will hold that "the abolition of private ownership of land *without one penny of compensation to present owners*" is a purely political question. There is certainly a very grave

question of Ethics and Religion involved. And, for our part, we are confident that the good sense of the majority—which always governs—of the citizens of our great and enlightened Republic will never permit such a communistic and anarchistic principle to become an issue in party politics.

—An item, published in our local columns, relative to the Conservatory of Music, will indicate a great improvement recently introduced by the Music Faculty of the University. A regular graduation in the classes of the Musical Department had always existed, and well-defined studies prescribed for the students. But during one or two years, owing to the paucity of students, the regulations were not strictly adhered to, and considerable latitude was allowed the pupils in "learning pieces" instead of practising "exercises." Recently, with the great increase in the attendance at the University, came a corresponding increase in the number of those desiring to take music lessons. The Faculty of the Department was also augmented, and measures adopted for providing the students with the best opportunities of becoming proficient in the study of music and its practical application, whether instrumental or vocal. Each student receives one half hour lesson daily, according to the programme of studies, which he is obliged to follow strictly as a means to his own improvement in the knowledge of such branch of music as he may elect to follow. Outside of his regular hours for lesson and practice his leisure moments may be given to learning pieces, by way of recreation.

—The great American Catholic Historian, Dr. John Gilmary Shea, has just issued the first volume of his "History of the Catholic Church in the United States." It is in every way a creditable work, and worthy of the genius of the distinguished author. In make-up it is one of the finest specimens of book work ever issued in this country, and we hope that many editions will be called for by an appreciative public.

The present volume covers the period from 1521 to 1763, and gives the history of the Catholic Church in the Thirteen Colonies—the Ottawa and Illinois Country, Louisiana, Florida, Texas, New Mexico and Arizona. Seven portraits on steel and one hundred and fifty other portraits, views of places and buildings connected with the history of the Church in this country embellish the volume. Dr. Shea has scoured the field thoroughly to 1873, and gathered together much that will astonish the most erudite of our historians. The care of the Illinois Country by the Bishops of Quebec through Vicars-General will be new to most people.

The completion of the work will form a most important event in American historical annals, and the crowning and imperishable monument to the genius of the gifted author who has already done so much—and almost alone—for the perpetuation of the history of the Church in America.

—On last Wednesday evening, the St. Thomas Aquinas' Academy held one of their philosophical debates, and the event proved one of the most successful of the year. The Director, Rev. S. Fitte, having extended a general invitation to the Seniors, the meeting-room was filled with students who assembled to hear Mr. Hugo C. Rothert defend the method of Induction in the physical and moral sciences as giving us a motive of certitude.

The Rev. Director opened the meeting by introducing the subject, and clearly put forth a few general remarks upon the nature of the Baconian method. Mr. Rothert then arose and opened the debate. He established his thesis in a masterly fashion. His arguments were solid and his proofs conclusive. We do not intend to expatiate at length upon the merits of his essay (which will appear in our next number), but we think it no more than right to say that Mr. Rothert evinced considerable depth of thought and logical power. But, notwithstanding the able manner in which the thesis had been upheld, the objections were many, forcible, and most difficult to refute. Mr. J. A. Burns in particular brought forward several very ingenious arguments which the defender found no slight difficulty in answering. He was also well assisted in his opposition by Mr. C. A. Rheinberger. When everything had been heard *pro* and *con*, and the method of Induction rested as firmly upon its basis as before, the Rev. T. E. Walsh made a few complimentary remarks, and then left the criticism of the evening to Col. Wm. Hoynes. The genial Professor of law has always taken a decided interest in the doings of the St. Thomas' Academy. His rising, accordingly, was marked with pleasure, and his many witticisms were uproariously received. He put everybody in good humor, and, having traced out the history of the famous method, dwelt upon certain points that bore relation to the law. Then, thanking the members for their kind attention (the reason of which was so obvious), he concluded amid loud demonstrations of satisfaction, and the meeting adjourned.

—The members of the Sorin Literary and Dramatic Club—formed of the students of the Minim department of the University—gave a very pleasing and highly successful entertainment in St. Edward's Hall, last Saturday afternoon, in celebration of the 73d anniversary of the birthday of their venerable patron, Very Rev. Father General Sorin. The audience consisted of students, members of the Faculty, and a number of ladies from abroad. The exercises were of a varied character—consisting of music, instrumental and vocal, addresses, recitations, declamations, etc., the programme of which will be found printed entire in our local columns. Each of those who took part showed the good results of careful and judicious training, and contributed his share towards making the entertainment the complete success which the select and critical audience pronounced it to be. The congratulatory address, presented by F. Crotty,

deserves special notice; it was a composition of rare excellence. Among many very beautiful points that it contained was one vividly portraying the immense blessings that Notre Dame and her dependencies, and society in general, owed to the illustrious Founder.

At the close of the entertainment, Very Rev. Father General thanked the "Princes" for the performance, which, he said, gave him so much pleasure and did themselves such honor. But it was nothing more than what he expected from them. He said he would leave it to the Rev. President to say what he thought of it. Rev. President Walsh spoke at some length. He encouraged the Sorins to keep up the good name they have. He said that, while it pleased him to see the old members, he was glad to find some new speakers do so well as to give great promise of the elocutionary talent of the Minim department—a talent, he said, that all should now endeavor to cultivate, as it would be very useful to them in after-life. He paid a special compliment to the singing, and to the Minims who for the first time sang and played without being accompanied by any member of the Faculty. He concluded his excellent speech by saying that "the Sorins but voiced the sentiment of all at Notre Dame in congratulating Very Rev. Father General and wishing him many other glad returns of the happy anniversary." Rev. Father Fitte next said a few words of compliment and encouragement to the young performers, with a beautiful reference to the occasion which called forth the celebration; and thus closed the seventy-third commemoration of Father Founder's birthday.

The Eighteenth and Nineteenth Centuries in English Literature.

The eighteenth century has been called the Classical Age of English Literature, on account of the highly-wrought, polished style of the writers of that period, and the exquisite purity of their language; for a long time the reign of Queen Anne was looked upon as the greatest epoch in English Literature. This wonderful century opens in prose with a writer who, in some respects, is the greatest prose-writer of any age. Addison in prose is matched by Pope in poetry. In this century the magazines and periodicals attained their highest popularity and numbered among their contributors the most noted writers of the day. In this century the novel also appeared—a new departure in Literature—and sowed the seed of a mighty and inexhaustible harvest. The novels of the eighteenth century compared with those of the nineteenth seem almost as different in both character and style as poetry from prose; and the former century must give way to the present in regard to novel-writing, for it cannot boast of such names as Walter Scott, George Eliot and Bulwer-Lytton. The first, fitly named "The Great Enchanter," excels them all, both in the versatility of his genius, and in his admirably faithful delineation of human character. But in satirical works the eighteenth cen-

ture is superior beyond comparison; for where in the literature of the present century shall we find a satire which can compare with Jonathan Swift's inimitable "Gulliver's Travels"? In poetry, while Alexander Pope is in the very foremost rank of the greatest poets of all time, yet, as compared with the nineteenth century poets, the nature of the subjects he treated places him at a great disadvantage; for, as one of the greatest critics of English Literature says: "There are no pictures of nature or of simple emotion in his writings. He is the poet of town life, and of high life, and of literary life, and seems so much afraid of incurring ridicule by the display of feeling or unregulated fancy that it is not difficult to believe that he would have thought such ridicule well directed." The society in which Pope lived was one in which every kind of subject was debated with the greatest eagerness; this intellectual excitement was reflected in its literature, and, special attention being given to form, the result was a limpidity of style among the prose writers and a neatness of expression in the pages of the poets which are unsurpassed and unsurpassable.

At the same time it must be admitted that Nature, Passion, and Imagination suffered a temporary decline. The poets of the present century opened up a new world of Nature and Man, of which such wizard enchanters as Byron, Shelley, Keats, Wordsworth and Tennyson are the freeholders. Into this world Pope could not enter. Even as regards the characteristic quality, which was for a long time considered his indefeasible title to excellence,—viz., smoothness of verse and melody of cadence,—the nineteenth century bears away the palm in the person of at least one of her representatives—Algernon Charles Swinburne; for there never was and never will be a poet that can equal him in beauty of rhythm. If we compare the two centuries with regard to historical works, the eighteenth must take precedence with such writers as Hume, Gibbon, and Robertson—three men who first raised History to the rank of Literature. Although their works—especially those of Gibbon—are disfigured by intense religious bigotry, yet it must be confessed that they are far superior to those of any historical writers of the present century. Macaulay may be more entertaining, and his sentences may be constructed with more regard to the considerations of beauty and picturesqueness, but as a historical authority he is altogether untrustworthy. What else could we expect in the case of an author who, again and again, makes a holocaust of facts on the altar of rhetoric? As for Lingard, he is almost unimpeachable on the score of veracity, but his style lacks the force and fire of Gibbon and Hume.

In conclusion, our estimate of the comparative merits of the Literature of the eighteenth and that of the nineteenth centuries cannot be better expressed than by repeating once more that oft-quoted but eternally fresh expression of Horace:

"O matre pulcra filia pulcrior!"

A STUDENT OF LITERATURE.

Books and Periodicals.

—Half a dozen years ago it seemed impossible for *Wide Awake* to be more beautiful or more attractive; yet, year after year, it has gone on, adding new features and developing old ones, until, it seems at last, excellence can no further go. Its wealth of stories, sketches, poetry and illustrations furnish an inexhaustible reservoir of entertainment and instruction for the members of the family circle, old as well as young, and its monthly visit is like a ray of golden sunshine in the household. *Wide Awake* fills every demand for a first-class magazine for children in the way of amusement, solid, valuable reading, stimulating thoughts and suggestions, and artistic illustrations. The Christmas (Dec.) issue is particularly fine. It contains about a hundred pages crammed with reading matter and pictures. Price, 20 cents. The yearly subscription price has been reduced to \$2.40 a year (from \$3.00), while the magazine will be made more attractive than ever. D. Lothrop & Co., Publishers: Boston.

—The *American Catholic Historical Researches* for January signalizes the inauguration of its new management by appearing in a new and tasteful dress. Among the interesting articles are: "Scenes from the Texas Mission of Half a Century Ago," by the Rev. A. A. Lambing; "St. Augustine's Mortuary Chapel, South Boston, and its Founder, Rev. Philip Larisey, O. S. A."; Comparative Exhibit of the Catholic Population of Boston—1790 to 1829"; "Patrick Colvin, the Ferryman of '76, and Friend of Washington—Trenton's First Catholic"; "The First Amendment to the Constitution of the United States"; "The Jesuits in Maryland"; "Letters of Our First Bishop," etc., etc. The object of the publication of the *Researches* is sufficiently indicated by the title. It aims to be "a repository of facts relating to the Church in America." It is in every way deserving of a widely extended circulation, and we earnestly hope that the patronage accorded will warrant its being issued more frequently.

—The *Art Amateur* for February has for its most striking feature an admirable, double-page crayon drawing—"The Man at the Wheel,"—by E. Renouf. Scarcely less noticeable is the fine charcoal head of Alfred Tennyson, by Jacques Reich, from the drawing in the Salmagundi Exhibition. Among the numerous practical designs are several for chasubles and chalice veils, a panel of oak leaves and acorns for wood carving, and decorations for a fruit plate (apples) and a square vase (phlox). A long and interesting illustrated notice is given of the A. T. Stewart collection, which is to be sold next March. The specially practical topics treated in this number are fruit and portrait painting in oils, the use of water colors, china painting and church vestments. There are also several useful articles on interior decoration, including a suggestive talk on the "Color Scheme of a Room." The various exhibitions and other

themes of current art interest receive pungent notice in "My Note Book" and the Boston and Paris correspondence. A prize of one hundred dollars for the best design for a new cover for *The Art Amateur* is offered by the publisher, Montague Marks, 23 Union Square, New York.

—In the *Century* for February the Life of Lincoln, by Hay and Nicolay, is occupied with Lincoln's first term in Congress, and his life as a lawyer, this instalment concluding the first portion of the biography and carrying its subject to his fortieth year. His campaign for Congress, his opposition to the principle of the Mexican War, his maiden speech in the House, his bill to abolish slavery in the district of Columbia, his attitude toward appointments to office, and his characteristics as a lawyer, are part of the subject-matter of the February chapters. The responsibility for the Mexican War is discussed with a slight tinge of anglomania, and pictures are given of Western life in 1850, and character sketches of Peter Cartwright, Col. E. D. Baker, and others. The gallant Gen. Shields comes in for another sneering attack, for which some slight compensation is made by a forced acknowledgment of his bravery and services. The engraved portraits include Presidents Van Buren, Tyler, Polk and Harrison; Gen. John J. Hardin, Baker, Cartwright and his wife, David Davis; Col. Seaton, David Wilmot, and Joshua R. Giddings. There is a biographical sketch of President James McCosh, of Princeton College, with a finely engraved portrait, which forms the frontispiece to the number. Prof. Langley continues his "New Astronomy Series," with a paper on "The Stars." In this paper he pays special attention to the work of American astronomers in spectroscopy, and considers the popular notion as to the return of the "Star of Bethlehem." Many interesting illustrations accompany the article. Other illustrated articles are: "Recent Discoveries of Works of Art in Rome"; "Lee's Invasion of Pennsylvania"; "The Oldest Church in London"; "A Mid-Winter Resort," etc., etc.

Personal.

—Messrs. J. W. Smith and Thomas F. Burke, of Denver, Col., were welcome visitors to the College during the week, the former visiting his son, Fisher, in the Minim department.

—Rev. D. J. Hagerty, C. S. C., '76, Rector of St. Patrick's Church, South Bend, was recently made the recipient of a rich and elegant gold embroidered preaching-stole, by the pupils of St. Joseph's Academy, as a token of their esteem. The vestment is of very costly material—silk and gold—with beautiful designs in gold cloth and jewels. It is a splendid specimen of the skilful and artistic handiwork of the Directress of the Art Department of St. Joseph's Academy, and a beautiful testimonial of esteem for a beloved Pastor.

—One of the most noble and dignified figures of

our time is the Very Rev. E. Sorin, Superior-General of the Congregation of the Holy Cross. He founded the establishment at Notre Dame, Indiana, at a time when there was a wilderness for miles around. He began by converting the Indians, who gave their rude trinkets to begin his foundation, which from its very beginning was American. Father Sorin and his staff—of which the head is the Rev. Father Walsh, one of the most cultivated and genial gentlemen in America—have never lost sight of the necessity of making their system part of the life around them. Hence their success.—*N. Y. Freeman's Journal*.

—Among the visitors during the past week were: Mrs. F. S. Wright, Mrs. Emma Wright, Mrs. Charles E. Roche, Chicago, Ill.; R. C. Garrabrant, Omaha, Nebraska; Mrs. O. N. Hilton, Paw Paw, Mich.; Mrs. L. Riedinger, Misses Addie and Carrie Riedinger, Marquette, Mich.; Mr. Wm. White, Cincinnati, O.; Mrs. S. H. Chute and daughter, Minneapolis, Minn.; Dr. S. B. Hiner, Lima, Ohio; Mr. E. J. Rizer, Ft. Madison, Ia.; Mr. and Mrs. Farr, Kankekee, Ill.; Hon. George Loughman, wife and daughter, South Bend; Mrs. Mary Hamilton, Brownsville, Ohio; Mrs. Dan Benton, Indianapolis, Ind.; Mr. F. C. Monahan, Miss Emma Murphy, Mrs. A. B. Sullivan, Chicago, Ill.; Mrs. T. B. Corbett, Denver, Col.; S. W. Slaton, A. E. Atwater, Birmingham, Ala.; Thos. J. Kearney, Detroit, Mich.; Col. D. S. Stills, Cleveland, Ohio; A. B. Trentman, '63, Ft. Wayne, Ind.

Local Items.

- "Eli" got here!
- O tempora! O mores!*
- It's all over the premises—mud!
- Now for the opening of Navigation!
- There are indications of a return of Spring.
- The Moot-court evidently has adjourned *sine die*.
- The Thespians are actively preparing for the 22d.
- The Sorin entertainment was a most delightful affair.
- Officers for Company B., H. L. G., will be appointed to-morrow.
- The Ecclesiastical Conference was held last Thursday morning.
- Never try to cover your own faults by speaking of those of others.
- The groundhog is a success. Winter weather seems to have departed.
- Never be subservient to wealth or rank, nor overbearing to the poor or lowly.
- The Telescope has been boxed up until the completion of the new Observatory.
- A very interesting "circle" of the St. Thomas' Academy was held on Wednesday night.
- When one begins to consider himself a genius,

it is then he fails to give substantial proofs of the fact.

—Music by the Band will certainly be one of the pleasing features of the celebration on Washington's Birthday.

—Nature's nobleman is he who never deviates from the path of duty, either through fear of the strong or contempt of the weak.

—Are we to get on the outside of a B. B. banquet this year? We can appreciate one as thoroughly as the boys of last year, we wager to bet.

—The question of how to reduce the debts of the Lemonnier boat club now lies before its members, and it is one for the club's best brains to grapple with.

—The members of the Junior Company of the H. L. G., under the command of their able Captain, Geo. Craig, have attained a high degree of proficiency.

—Rev. President Walsh gave the Minims "rec" on Saturday, in honor of Very Rev. Father General's birthday. They also had a treat of delicious Florida oranges.

—Preparations for the 22d are in full blast. The sterling drama of "William Tell" will be given for the delectation of the "large and appreciative audience" on that day.

—The following names were omitted by mistake from the Junior "Roll of Honor" last week: Masters Black, Barr, Brauneck, E. Campbell, Cartier, Dunning, E. Doss, Draper, Mallay.

—The advice which the genial Director constantly gives the Euglossians is—"Practice, Practice, Practice." In following this they may hope to realize fully the motto of their organization—"Semper parati."

THE LATERAN BASILICA.

Ye multipliers of ephemeral creeds,
In vain the bulwarks of our faith ye batter on!
The earliest church will be, as time proceeds,
Always the latter 'un.

—In response to a request from Col. Hoynes, State Senator Howard writes that he will undoubtedly be able to procure an additional supply of rifles, with necessary accoutrements, from the State for the use of the military companies here.

—In the list of Examination Averages, published last week, W. Waixel should have been credited with an average of 82 instead of 62, and D. J. Stephens, whose name was omitted through mistake, should have figured with an average of 88.

—The 12th regular meeting of the Sorin Literary and Dramatic Association was held in St. Edward's Hall, on Monday, Feb. 8. Competitions were read by Masters C. Mooney, E. Jewett, T. Tomkins, I. Mahon, C. Boettcher, R. Boyd, J. O'Mara, C. Koester, H. Silver, W. Martin, E. Foote, and W. Williamson. The greater number of the papers were good, and bore the mark of industry and application.

—Sergeant Major G. H. Craig, having been detailed to act as Captain of Company "B," Hoynes'

Light Guards, promotions have taken place in Company "A," as follows: W. Cartier, Sergeant-Major; C. Stubbs, 1st Sergeant; C. Combe, 2d Sergeant; J. V. O'Donnell, 3d Sergeant; L. Bolton, 4th Sergeant; W. Bingham, 1st Corporal; P. Paschel, 2d Corporal; A. S. Triplett, 3d Corporal; H. Long, 4th Corporal.

—Professor Lyons's "Almanac" (University of Notre Dame) is a very good issue. Professor Lyons is one of the cleverest editors in the country. He shows it by the manner in which he utilizes his material in this very entertaining and varied annual collection. One of his contributors, Professor Arthur Stace, is a humorist whose quaint fancies are as humorous as Frank Stockton's, or those of that Alden, now at Rome, who used to write the fifth column editorial in the *New York Times*.—*Freeman's Journal*.

—The Irish origin of the celebrated Réaumur has now been proved beyond a doubt. He is, in fact, identical with Rory O'More, the name being simply slurred by rapid pronunciation. If any further proof were wanting, it would be found in the fact of the celebrated aphorism, "*There's luck in odd numbers*," attributed by the common consent of all nations to Rory O'More, being found as the ruling principle in the construction of Réaumur's thermometer, the numbers on which are *at odds* with those on the Fahrenheit and centigrade thermometers.

—It is interesting to note, as we learn from Bro. Charles—the Curator of the Conservatory of Music, and one of the pioneer inmates of Notre Dame—that the late lamented Prof. Ackermann organized, and was Captain of the first Military Company ever established at Notre Dame. The company was organized in 1853, and continued in existence, with the variations in membership incidental to college-life, until the outbreak of the war. Some of the members were among the first to respond to the call of their country, several holding commands. One, in particular, may be mentioned now, the late Brig. Gen. W. F. Lynch, of '62.

—On Thursday last, several of the students of the Junior Orthography Class, under the direction of their teacher, Bro. Leander, and accompanied by Bro. Marcellinus, took a little trip to St. Joseph's Farm. Their reception at this pleasure resort was in perfect keeping with the hospitable character of the inmates. A most bountiful dinner was spread and a most enjoyable time had. This privilege was granted the students by Rev. President Walsh, in consideration of their excellent standing in class. We understand that the same treat is in store for members of the other classes in this department whose record during two months will show equal excellence.

—A special meeting of the Junior Branch of the Archconfraternity of the Blessed Virgin Mary was held Sunday evening, Feb. 6, for the purpose of reorganizing for the second session. Officers were elected as follows: Director, Rev. T. E. Walsh, C.S.C.; Spiritual Director, Rev. A. Granger,

C. S. C.; President, Rev. A. Morrissey, C. S. C.; 1st Vice-President, T. A. Goebel; 2d Vice-President, E. J. Darragh; Recording Secretary, F. Long; Treasurer, E. S. Ewing; Standard Bearer, L. P. Chute. Masters Darragh, Long and McPhee were appointed to prepare essays for the next meeting. An appropriate instruction was then given by the President, after which the meeting adjourned.

—At the 17th regular meeting of the St. Cecilia Philomathean Society, held Feb. 2, Masters W. Boland and W. O'Brien were admitted to membership. The following appointments were made: W. Clifford, Critic; H. Vhay, Clerk of the Moot-court; S. Nussbaum, Pianist; W. Welch and W. Morrison, Monitors; C. Cavanagh and M. Falter, *Chargés d'Affaires*.

The eighteenth regular meeting was held Wednesday evening, Feb. 9. Masters G. Cooke, G. Tarrant, J. Keating were admitted to membership. An essay was read by J. Fisher, and a speech delivered by T. Goebel. A vote of thanks was returned to Rev. S. Fitte, C. S. C., President of the St. Thomas Aquinas' Academy, for a kind invitation to attend the debate given by that Society.

—The Director of the Historical Department acknowledges, with many thanks, the receipt of the following gifts: "History of The Catholic Church in Colonial Days—The Thirteen Colonies; The Ottawa and Illinois Country; Louisiana; Florida; Texas; New Mexico and Arizona—1521–1763—with Portraits, Maps, Views and Fac-similes—by John Gilmary Shea;" manuscript of the History of the Catholic Church in the Diocese of Pittsburgh; Laity's Directory for 1840, and three works written by himself, presented by Rev. Dr. Lambing: coin of the Emperor Constantine, presented by R. Hart: photographs of the interior and exterior of Mexican churches; photograph of the Indian chief, Sitting Bull, presented by Bro. Cajetan: Japanese *tam tam* of wonderfully beautiful tone, from Signor Gregori: set of "The Catholic Missions" complete from the beginning, and "The School Question, by Hon. Z. Montgomery," from the Editor of *The Ave Maria*: "Two Years of Socialism in Europe and America," presented by Rev. Dr. Roles: "Life of Gen. Custer" and "Life of Abraham Lincoln," presented by Mr. Thomas.

—Accessions to the Bishops' Memorial Hall, Notre Dame, Ind.:—Jewelled mitre with a profusion of embroidery in gold bullion, used by Rt. Rev. Mgr. Shannahan, first Bishop of Harrisburg, presented by Rev. Father Hannigan, of Philadelphia. Mission stole used by Rt. Rev. Mgr. Cretin during the last years of his life, presented by Rev. Father Oster. Nineteen letters of great interest written by Bishop Bruté to Rev. M. François, Pastor of Logansport; ten letters written by Rt. Rev. Mgr. de la Hailandière; three in the handwriting of Rt. Rev. Bishop Bazin; seven written by Bishop de St. Palais; three by † William, first Bishop of Chicago; four by Archbishop Eccleson, of Baltimore; two by † John Mary, Bishop of Claudiopolis and Vicar-Apostolic of Texas; eight

by † Anthony, third Bishop of New Orleans; five by Rt. Rev. M. O'Connor, first Bishop of Pittsburgh; two by Rt. Rev. A. Byrne, first Bishop of Little Rock, presented by Father Kenrick. "Reminiscences of a Day in Halifax, etc.," with autograph of the author, Rt. Rev. Bishop Rogers, who presented this copy to Rev. P. Dillon. Mitre used by Rt. Rev. Francis Patrick Kenrick, third Bishop of Philadelphia, presented by Rev. J. G. Two autograph letters of † Stephen, third Bishop of Vincennes; two of Bishop Miege; eleven of Archbishop Purcell; five of Archbishop Spalding, presented by Rev. J. Campbell. Embroidered gold cloth mitre, set with emeralds and amethysts, used by Bishop Baltes, presented by Rt. Rev. Mgr. Janssens. Bishop Amat's gold cloth mitre and coat of arms carved on wood, presented by Rt. Rev. Bishop Mora.

—ELI PERKINS.—The lecture in Washington Hall last night was one of the most enjoyable events of the season. By the great majority of the audience the speaker had never been heard before; but his fame had preceded him, and all had formed expectations that, we are glad to say, were not disappointed. As a delineator of the characteristics of wit and humor. Eli's reputation is national; and, from what it was our pleasure to hear, we can say it is well deserved. The early hour of going to press precludes all possibility of giving such an extended notice as we would wish to give. We can only say that after an introduction by President Walsh, the lecturer mounted the stage, amid applause, threw off his overcoat—sealskin—in his own characteristic fashion and announced his subject—"Why we laugh!"

He told us that "when we laugh, it is always at some deformity," whether in appearance, speech, grammar, orthography, composition, rhetoric, oratory, logic, painting, or music. In the development of this thought the speaker, certainly, took a very wide range of subject-matter, but he covered the field—as his subject required of him—and he had only two hours to do it in! It is true that some among the extremely younger portion of the audience, though evincing a most enthusiastic interest in the earlier part of the proceedings, after a while became oblivious to all surroundings and treated the speaker with utter neglect. But at this important juncture, Mr. Perkins specially directed his remarks to the aforesaid portion, and eventually succeeded in bringing them to a realization of their position.

We would like to say more, but—our time is limited. After all, we may, perhaps, best express everything by saying that the full, continuous, uninterrupted two hours of entertainment were appreciated by the audience, and that the many illustrations, both in voice and action were all that could be desired. We shall be pleased to hear Mr. Perkins again.

—A celebration in honor of the seventy-third anniversary of Very Rev. Father General Sorin's Birthday was given by the members of the Sorin Literary and Dramatic Association, in St. Ed-

ward's Hall, on Saturday, Feb. 5, at 2 o'clock p. m.
The following was the

PROGRAMME:

- Fredonia March (Piano).....*Lothrop*
J. O'Mara.
Birthday Song Chorus.....*Emerson*
Masters H. Huiskamp, C. Mooney, F. Crotty, J. McIntosh,
A. Sullivan, C. Priestly, R. Graham, R. Munro, A.
Nester, E. Jewett, A. Morgenweck, F. Rogers,
T. Tomkins, T. Mahon, L. Black.
Address.....Masters F. Crotty, J. O'Neill, C. McPhee
Recitation—"They Didn't Think!".....*Carey*
C. Franche.
"The Hero".....*Ave Maria*
W. Williamson.
"Truth in Parentheses".....*Hood*
E. Garber.
"Those Hearts of Ours!".....*Father Ryan*
J. McIntosh.
Song and Chorus—"The Starry Dome".....*Price*
H. Huiskamp and Minim Orpheonics.
Dialogue—"The Collegian".....*Fowler*
W. McDonnell, C. Priestly, T. Tomkins.
Recitation—"To Our Lady!".....R. Graham
"What is the Use of all this Fretting?".....T. Tomkins
"I Often Wonder why 'tis So!".....*Father Ryan*
R. Munro.
"Garcia Moreno".....*Ave Maria*
F. Crotty.
Dialogue—"The Mathematician".....*Fowler*
C. Priestly, R. Munro.
"A Heart, a Face, and a Name".....*Father Ryan*
J. McIntosh.
"The Ladder of St. Augustine".....*Longfellow*
C. Mooney.
Dialogue—"The Young Prodigy".....*Fowler*
W. Martin, A. Nester, F. Falvey.
Birthday Greeting.....J. McIntosh
Retiring March (Piano).....*Bellini*
M. Loewenstein.

—At a special meeting of the musical Faculty, held recently, several important measures were adopted for the improvement and advancement of the classes in the Conservatory of Music. Among these features was a change in the works to be followed by the students. We deem it of sufficient interest to reproduce here, in outline, the course of studies in the Musical Department, as it now exists under the new departure. Following is the

PROGRAMME OF STUDIES IN THE CONSERVATORY OF MUSIC:

PIANO.

4TH CLASS:—Jean Mann's method for piano, first 50 pages.
3D CLASS:—Finish Jean Mann's method; Daily exercises and arpeggios. 2D CLASS:—Continuation of daily exercises and arpeggios in connection with some select pieces of different authors; Köhler's studies, op. 50; Stephen Heller's, op. 47; Duvernoy's school of mechanism, op. 120, preparatory to Czerny's velocity; Czerny's velocity; Heller's progressive studies, op. 46, Book I and II. 1ST CLASS:—Continuation of scales and arpeggios; Czerny's 40 daily exercises, op. 337; Cramer's studies; Mozart's and Beethoven's sonatas; Moscheles, op. 70.

VIOLIN.

4TH CLASS:—De Beriot's method for violin, 1st position; Mazas duos, op. 38, Book I; Gebauer's, op. 10. 3D CLASS:—2d and 3d position; Pleyel's, op. 48; Mazas, op. 38, Book II; Mazas, op. 70. 2D CLASS:—Finish 1st Book of De Beriot. Mazas *études spéciales*; Mazas, op. 71, Book I and II; Mazas, op. 71, Book I and II; Haydn and Mozart's violin sonatas. 1ST CLASS:—2d Vol. of De Beriot's method; Mazas *études brillantes*; Kreutzer's 40 studies; Mazas, op. 41, Book I and II; Krommer's, op. 54, 6 and 22. Viotti's concertas, No. 23, 24, 28 and 29.

CLARINET:—Klose's method for clarinet.

CORNET:—Arban and Eaton's methods.

FLUTE:—Devienne's method.

GUITAR:—Hollander's method.

VOCAL DEPARTMENT.

3D CLASS:—Lutgen's method of sightsinging, first series.
2D CLASS:—Lutgen's 2d and 3d series; Concone's 50 exercises, op. 9; Lutgen's velocity, Book I. 1ST CLASS:—Lutgen's velocity, Book II; Rossini's solfegios. Lamperti's *esercizia di bravoura*.

Roll of Honor.

[The following list includes the names of those students whose conduct during the past week has given entire satisfaction to the Faculty.]

SENIOR DEPARTMENT.

Messrs. Arado, Archambeault, W. Akin³ Ashton, Aubrey, J. Burke, Becerra, Britt, Bingham, Brownson, P. Burke, Baca, Barnes, Bush, Barrett, Bernhart, Beaupre, Burns, Colina, Craig, Cusack, W. Cartier, G. Cartier, C. Combe, F. Combe, Coady, Crilly, Craft, Cassidy, Dwyer, W. Dorsey, S. Dorsey, Doherty, Dore, Dillon, Dierdorff, Dempsey, Finckh, Ford, Fehr, Fry, Grever, Gallardo, Galarneau, Gordon, Gibbs, Griffin, Houck, Hiner, Hummer, Hagerty, Henry, Judie, Jeffs, Kramer, Kleiber, Kendall, Kreutzer, J. Kelly, Kingsworth, Ley, J. Langan, Lyons, Luther, Latshaw, McKeon, J. McDermott,* T. McDermott, McAlister, McGinnis, Mallay, Moffatt, Mulkern, V. Morrison, McNamara, J. Meagher, L. Meagher, Myers, Murnan, Maier, McNally, Noonan, Neill, Nelson, F. Nester, Andrew Nicholl, Alfred Nicholl, J. Nester, O'Rourke, O'Regan, O'Connell, O'Kane, L. O'Malley, J. O'Malley, Padilla, P. Prudhomme, E. Prudhomme, J. Prudhomme, Prichard, Pender, Ryan, Rheinberger, Rothert, Rodriguez, Rochford, A. Rudd, W. Stattman, Suing, W. Sullivan, O. Sullivan, Shannon, H. Smith, Strasser, Triplett, Woodbridge, Wilson, W. White, M. White, A. Williams, Weber, Wagoner, W. Williams.

JUNIOR DEPARTMENT.

Masters Adelsperger, Austin, Adams, Anderson, R. Bronson, H. Bronson, Blessington, Badger, Bunker, Bull, Brabrook, W. Boland, Baca,* Benner, H. Boland, Burns, Berry,* Burtis, S. Campbell, J. Clarke, B. Clarke, Cleveland, Carney, Cavanagh, Clifford, Cobbs, Cooney, Coad, L. Chute, F. Chute, Curtis, G. Cooke, Duffield, Devine, Draper,* Dempsey, T. Darragh, E. Darragh, Ewing, Fitzharris, Falter, F. Flynn, Figge, Flood, Fisher, Freeman, Galarneau, Goebel, Garber, Glenn, Girtten, Hoffman,* Houlihan, Hart, Henry,* Houston, T. Hake, A. Hake, Hayes, Hampton, Handley, Hibbard,* Inks, C. Inderrieden, R. Inderrieden, Jewett, Joyce, Jacobs, Julian, Kerlin, F. Konzen, W. Konzen, Kern, Kutsche, Keating, Kinsella, Landenwich, Long, Lane, Monarch, McKenzie, McCart, Mathewson, J. McCormick, McMahan, McIntosh, Macatee, McPhee, McNulty, Moncada, Morrison, Mitchell, McGuire, McDonald, McCambridge, McCabe, Nations, Noud, Ormond, O'Brien, O'Shea, Pfau, L. Paquette, C. Paquette, Preston, Quealey, Roper, Ramsey, Reynolds, Rosenthal, Riedinger, Sweet, J. Stephens, B. Stephens, M. Smith, F. Smith, Steele, Schloss, Sullivan, Taliaferro, Tewksbury,* Tarrant, Teden, Vhay, Warner, Wilbanks, L. White, H. White, Wageman, Walker, Walsh, Weldon,* Wade, Wagoner, Wilkins, Weimer, Wile.

MINIM DEPARTMENT.

Masters Boyd, Bloomhuff, Blumenthal, Boettcher, Black, A. Backrack, H. Backrack, S. Backrack, Clendenin, Cohn, Crotty, W. Connor, C. Connor, J. Conners, Cooke, E. Conners, Corbett, Doss, J. Dungan, Jas. Dungan, Davidson, L. Dempsey, J. Dempsey, Dahler, Foote, E. Falvey, T. Falvey, F. Falvey, G. Franche, C. Franche, Gale, Grant, Garber, Griffin, Graham, Goldman, Garrabant, H. Huiskamp, J. Huiskamp, Haney, Hillas, Jewett, Kutsche, Koester, Keefe, Kane, Klaner, Kerwin, Kraber, Kinsella, Löwenstein, Lane, Lewin, McIntosh, McDonnell, Martin, C. Mooney, H. Mooney, Mahon, L. Mayer, Munro, A. Mayer, G. Mayer, McPhee, Mason, A. Morgenweck, Mainzer, McGuire, Nester, O'Mara, O'Neill, O'Donnell, Paul, Priestly, Quill, Riordan, Rowsey, Rogers, Savage, Sweet, Stone, Silver, A. Sullivan, J. Sullivan, F. Sullivan, F. Toolen, F. Toolen, Tompkins, Triplett, Taft, A. Williamson, W. Williamson, Witkowsky, Weckler.

* Omitted by mistake last week.

Saint Mary's Academy.

One Mile West of Notre Dame University.

—Warm acknowledgments are extended to Miss Mary Fuller for a beautiful Birthday greeting painted by her skilful brush.

—Miss Martha Munger, Class '86, who has been suffering from a long and dangerous illness, we are happy to learn, is somewhat improved, and hopes are entertained of her rapid recovery.

—Each Junior who was placed on the "Tablet of Honor" this week was entitled to draw for the Roman mosaic cross. It fell to Ola Boyer, who waived her right in favor of Margaret Hull.

—The Minims were made the recipients of a very welcome gift, that of a small, but very pretty politeness badge—a blue and gold, heart-shaped locket, and a pin to match on a tasteful background of blue. It was presented by Edith Heyman, of the Junior department.

—On Sunday evening, an address in honor of the 73d anniversary of Very Rev. Father General's birthday was read by Miss Fuller. Very beautiful recitations followed: "Richelieu and France" (Bulwer), by Miss Carmien; "Red Riding Hood" (Whittier), by Miss Williams; and "The Monk Felix," by Miss Wolvin.

—Accidentally, the work of two young ladies of the Art Department was left out in the mention of last week. Five pieces by Miss Rose: In oil, "A Snow Scene," "Roses and Lilacs," and "Pansies"; in Water colors, "A Coast-guard Scene," and "Aquatic Fowls." Two pieces in oil by Miss A. Kennedy—a "Venetian Panel" and a "Marine Scene."

—Miss Jennie E. Fowler, a former esteemed pupil of St. Mary's, and a daughter of W. B. Fowler, of Lafayette, Ind., was united in the holy bonds of wedlock to Mr. Harry J. Caldwell, of Springfield, Ill., on the 26th ult. That joy and every blessing may attend the happy couple in the journey of life is the earnest wish of the fair young bride's many friends at St. Mary's.

—The Princesses offer to one of their friends their grateful appreciation of her kind attention to their amusement on her late visit to Chicago. The Japanese birds she brought to them on her return are simply charming. The owl, the cocatoo, the parrot, the Bird of Paradise, the sparrow, the wren, the pheasant, and the canary, are the sweetest voiceless birds they have ever entertained in their miniature Palace.

—Visitors during the week were: Mrs. Reidinger, *née* Miss Ada Crowley (Class '64), Mr. McCabe, Miss Sheridan, Marquette, Mich.; Mrs. L. Tomlins, Miss Geer, Miss Murphy, Mr. F. J. Dunn, Chicago; Mrs. J. B. Maguire, Englewood, Ill.; Miss Monahan, Pullman, Ill.; Mrs. Chute, Miss Bessie Chute, Minneapolis, Minn.; Miss E. Black (Class '74), Milwaukee, Wis.; Mr. N. Gordon, Mr. I. N. Griffin, Mr. C. Yost, Elkhart, Ind.;

Mr. Burke, Berrien Springs, Mich.; Miss Dale, Goshen, Ind.; Mr. and Miss Evans, Paw Paw, Mich.; Miss Wisehart, Des Moines, Iowa; Mr. W. B. Farnsworth, Mr. E. K. Dickerson, Howell, Mich.

The Semi-Annual Soiree.

At half-past three o'clock on the afternoon of Monday, Jan. 31, a select audience was gathered in the vocal hall to listen to the musical and literary entertainment prepared for the closing of the first scholastic session.

Schumann's "Gypsy Chorus," by the Vocal Class, worthily opened the beautiful programme, and was followed by J. G. Whittier's brilliant poem, "The Yankee Girl," recited by Miss Carmien in a truly admirable manner. Miss Shephard, whose superior musical talent and ability is the admiration of all who have had the pleasure of listening to her performance on the piano, next gave, with delicate appreciation, a "harp-solo" by Godfroid. The two following numbers were presented by Miss Horn—*Begeisterung*, a fine essay in the German language, and an equally fine rendering of Liszt's *Rhapsodie*—"Pesth Carnival." The confidence necessary to sustain the passages of vigorous technical difficulty in this work of the great composer, was not for an instant wanting. Any one acquainted with the piece knows the unwearied strength demanded throughout, and only the well skilled are able to maintain this unfaltering effort. Miss Horn well deserved the high praises bestowed on her performance by the Rev. Father Kirsch. Miss Eleanor C. Donnelly's grand poem "Revere the Church Thy Mother, and Love Thy Fatherland," was next recited by Miss Wolvin, with impressive action and faultless elocution.

After the well-rendered "Vocal Trio" by the Misses Gavan, Guise and Moran, Miss Dillon was about to play her very difficult "Harp Solo," when, fortunately, the tuner broke a harp string, which necessitated the removal of the instrument for repairs, and in the meantime the young lady stepped forward and read her essay, "The One Thing Needful," in a manner to touch the hearts and to bring tears to the eyes of many of her class-mates. By this time the harp was tuned; Miss Dillon resumed her place at the instrument, and swept the magic strings of the national instrument of her forefathers with a masterly touch. Miss Shephard then played the "Ballad in G. Moll," from Chopin, in a manner to clearly demonstrate that the high hopes of the past in her regard were not unfounded. Her execution and rendering were worthy of her position in the "Advanced Course" of the Conservatory of Music. This completed, Handel's grand chorus, "Let their Celestial Concerts all Unite," was charmingly sung by the vocal class; and when the singers were seated, Very Rev. Father General Sorin rose to thank the young ladies, but declined praising them, saying that were he "in London, or Paris, or Rome, he might speak freely." His remarks were equivalent to confessing that, were

he to commend the programme, it would be "self-praise"; and it is true that the Academy, its institution, growth, prosperity and high standing in the educational scale of the United States, all are to be attributed to the faithful and untiring exertions of St. Mary's venerable Founder, Father General Sorin. Father Kemper, of Attica, Father Spillard, Father Kirsch, and Father O'Hanlon, of the University, expressed their pleasure. Father Shortis, Father Saulnier, and Prof. Gregori were invited to address the young ladies, but politely declined. Among those present were Mrs. McCambridge, of Morris, Ill.; Mrs. Birdsel and daughter, of South Bend.

Roll of Honor.

FOR POLITENESS, NEATNESS, ORDER, AMIABILITY, CORRECT DEPORTMENT, AND EXACT OBSERVANCE OF ACADEMIC RULES.

SENIOR DEPARTMENT.

Par Excellence—Misses Allnoch, Brady, Bates, Brophy, Blacklock, Beschamang, Blakeslee, Birdsell, E. Coll, Cogglin, E. Claggett, B. Claggett, Dillon, M. Duffield, C. Dempsey, H. Dempsey, Dart, Desenberg, E. Dunkin, M. Dunkin, Egan, Ewing, Foin, Flannery, Fravel, Griffith, Guise, B. Garrity, Horn, Hummer, Heckard, Hertzog, Harlem, Henke, L. Hutchinson, M. Hutchinson, Hawkins, A. Johnston, Kearsey, Kearney, Kearns, Kingsbury, Kennedy, McHale, L. Meehan, N. Meehan, Morse, M. McNamara, C. McNamara, Marsh, Moore, McCarthy, Moran, O'Conner, Negley, Neff, Pierson, G. Regan, Riedinger, Rend, Rose, E. Regan, Reed, Scully, St. Clair, Snowhook, Stadtler, Shields, R. Smith, M. Smith, Stafford, Stocksdaile, Sullivan, Sweet, Triplett, Thompson, Van Horn, Williams, Zahm.

JUNIOR DEPARTMENT.

Par Excellence—Misses Boyer, Bruus, Bridgeman, Cook, M. Coll, Crane, E. Dempsey, J. Fisher, K. Fisher, Fritz, Garrity, Griffith, Geer, Hake, Hinz, Hughes, Hull, Huntting, Heyman, Kennedy, Kendall, Knauer, Leonard, Lindsey, Mason, McDonnell, G. Meehan, Mercer, E. Nester, Prudhomme, Rhodes, Rogers, Stapleton, Stiefel.

MINIM DEPARTMENT.

Par Excellence—Misses I. Becker, McCormic, O'Mara, Pugsley, Wallace. *2d Tablet*—Miss E. Quealey.

Class Honors.

GRADUATING CLASS—Misses Horn, Dillon, Wolvin, Griffith, Kearney, Kearsey, St. Clair, Scully, Shephard, Williams, Fuller, Clendenen, McHale.

1ST SENIOR CLASS—Misses Hummer, G. Regan, Heckard, Trask, Brady, Sullivan, Guise, Carmien, Foin, Proby.

2D SENIOR CLASS—Misses C. Dempsey, Moran, Clifford, Barry, Bub, E. Coll, L. Meehan, Rend, Riedinger, Stadtler.

3D SENIOR CLASS—Misses Triplett, R. Smith, Pierson, McCormic, Fisher, N. Meehan, Egan, Kennedy, Desenberg, M. Duffield, McEwen, McDonnell, Quill, M. Hutchinson, Flannery, Griffin, Murphy, Miner, Bates, Harlem, Marsh, Regan, Shields, Blakeslee, Fravel, Huntting, Hinz, Schmauss.

INTERMEDIATE CLASS—Misses Blacklock, Garrity, Cogglin, Wynn, Allnoch, C. McNamara.

1ST PREPARATORY CLASS—Misses Wimmer, E. Claggett, B. Claggett, Moore, Sweet, Bragdon, Leonard, Blaine, Prudhomme, Beaubien.

2D PREP. CLASS—Misses Stapleton, Reed, Kennedy, Geer, Zahm, Lindsay, Mason, Hughes, A. Johnston, Knauer, Coll, Beschamang.

JUNIOR PREP.—Misses Kendall, Rogers, Caddagan, Crane, Hull, Rhodes.

1ST JUNIOR CLASS—Misses Campbell, S. Dempsey, Heyman, O'Mara, McCormic, Pugsley, Chlore.

2D PREP. CLASS—Misses M. Becker, I. Becker.

(From the "Salt Lake Tribune.")

Two Noted Educational Institutions of Holy Cross in Utah.

ST. MARY'S ACADEMY, SALT LAKE CITY.

Ever since 1875, St. Mary's Academy has held a prominent position in the educational line in this city. Year by year it had grown from its small beginning until it is now a great institution. Its field of usefulness has all the time been extending, until it draws pupils from all over the Great West. Sisters of the Holy Cross came from the well-known St. Mary's at Notre Dame, Indiana, where they spent years in preparing for their useful life work, and it is such devoted persons that have made for this institution such a grand success and merited fame. The Academy is located on a pretty street, in a pleasant, healthy part of the city, and, having extensive grounds and buildings, is not only an attractive place, but is so arranged as to be most admirably adapted to the uses to which it was designed. A very large portion of the pupils are from abroad, and make their home in the Academy during the session of school. Such pupils have the kindest attention bestowed upon them, and every provision is made for the protection and promotion of their health. The course of study embraces all the branches considered necessary to constitute a first-class education, and runs through ten grades, while special attention is given to some branches to better fit the pupil for the duties of life. Music is a prominent feature, for which a special building has been provided, in which no less than fourteen pianos and many other instruments are kept. Vocal music is also taught in this conservatory of music. The art school is also in a special building, and includes drawing, painting, needle-work, etc., in the many different kinds embraced in the art. But the best merits of the Academy are shown in the large numbers of pupils in attendance, there being 115 boarders enrolled since September, while the day pupils number 130, making 245 in all; of this number, 140 are taking music, and the art department has about fifty. The corps of teachers is large and efficient, and they are devoted to their duties as educators. The Academy has a patronage from this and all the other Territories, which they may well feel proud of, and which the institution merits.

SACRED HEART ACADEMY, OGDEN.

One of the noblest educational institutions in the country is that located at Ogden, and known as Sacred Heart Academy. The location is a pleasant, healthful one, while the large buildings are attractive, both as regards exterior and interior, making the place very homelike. Pupils are drawn from this and surrounding Territories and States, receiving them as young girls and graduating as accomplished young ladies, fitted for any exalted position in life. So popular is the Academy in this respect that the number of boarding pupils is between fifty and sixty, who find here the comforts of home, and the motherly care of the Sisters, who look after their interest with great concern, and exert a hallowed influence over the lives of the girls. The course of studies embraces the primary, preparatory and academic, and there is a high degree of thoroughness in all these. The Sisters are all graduates of St. Mary's, Notre Dame, and hence are well qualified for their duties as instructors. Each week a reception is given, to which the best class of citizens are invited, and thus the boarding young ladies receive interesting lessons in deportment as well as needed recreation, giving them added zest in the pursuit of knowledge. The school has two literary societies which, with the library, cabinet and philosophical apparatus, are great aids to all the pupils. Besides the thorough methods of instruction in the English branches and the languages, music and the fine arts receive so much attention that some thirty or forty pupils are taking music lessons, and as many more engage in painting, drawing and needle-work. This is a most worthy institution of learning in every respect, and it is no wonder that its present list of pupils, both as boarders and day scholars, should be larger than ever before during its history.